



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,709	12/17/2003	Yong-Sung Ham	0630-1835P	5806
2292	7590	06/01/2006		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER CHACKO DAVIS, DABORAH	
			ART UNIT 1756	PAPER NUMBER

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/736,709	HAM, YONG-SUNG	
	Examiner Daborah Chacko-Davis	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 March 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1.2 and 4-27 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-2, 4-27 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-27, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,722,760 (Jeong et al., hereinafter referred to as Jeong) in view of U. S. Patent No. 6,001,515 (Evans et al., hereinafter referred to as Evans).

Jeong, in col 1, lines 12-15, in col 2, lines 1-67, and in figures 2A through 2C, discloses a method of forming a pattern comprising providing a substrate wherein a plurality of panels and process-subjected layers are formed, wherein the substrate includes plurality of areas (forming display device on a large area of the substrate), providing a cliché with recesses (plurality of grooves), filling the recesses with resist, and transferring the resist formed in the recesses of the cliché to the process-subjected layer of the substrate by using a printing roll (transfer roll), with the same width (desired size) as that of the panel in the display device (substrate area), that rotates and contacts the surface of the cliché, and transferring the resist formed on the transfer roll to the process-subjected layer by rotating and contacting the surface of the process-subjected layer (claims 1-2, 5, 11-12, 17, and 18-20, ). Jeong, in col 2, lines 54-60, discloses that the length of the resist to be transferred (blanket) is the same as the circumference of the transfer roll (cylindrical) which in turn is the same as the length of

the panel (plurality of divided areas of the substrate) and that the cliché, and the transfer roll have the same size as that of the panel (divided area of the substrate) (claims 4, 6, 7, 13, 22, and 24-25). Jeong, in col 1, lines 18-67, discloses that the process-subjected layer (etching object layer) may be a metal layer, or a semiconducting layer or an insulating layer such as SiO<sub>x</sub> or SiN<sub>x</sub> (claims 8-10, 14-16).

The difference between the claims and Jeong is that Jeong does not disclose that the resist in the grooves is formed on the blanket formed on the surface of the transfer roll (printing roll), and that the printing roll is rolled with the blanker on the cliché. Jeong does not disclose that the printing roll with the blanker with the resist material is rolled thereon the surface of the etching object layer (claim 21). Jeong does not disclose that the size and shape of the blanket (same circumference) is the same as that of the roll, and that the height of the blanket is the same as that of the printing roll (claim 23). Jeong does not disclose that the area of the blanket is less than an area of the etching object layer (claim 26). Jeong does not disclose that the area of the etching object layer is substantially a whole multiple of the area of the blanket (claim 27).

Evans, in col 5, lines 48-67, in col 8, lines 20-24, discloses that a transfer layer (blanket) is applied onto the collector roll (printing roll) prior to transferring the resist in the grooves (resist pattern) to the roll, transferring the resist pattern onto the transfer layer (blanket), and then transferring the resist pattern on the transfer layer by rolling the collector roll, with the transfer layer and the resist pattern on the transfer layer, onto the glass substrate (etching object layer). Evans, in col 9, lines 12-65, and in figures 4, and

5, discloses that the circumference and shape and height of the blanket (transfer layer) is the same as that of the collector roll's, and that the area of the blanket (transfer layer) is less than that of the etching object layer (glass substrate), and the area of the substrate is a whole multiple of the area of the blanket.

Therefore, it would be obvious to a skilled artisan to modify Jeong by employing a transfer layer (blanket), having the claimed dimensions, on the printing roll as suggested by Evans because Evans, in col 5, lines 32-46, discloses that the transfer layer on the printing roll behaves as an in-situ planarizing layer, and prevents the subsequent operation of forming a planarizing layer after the transfer to a substrate.

### ***Response to Arguments***

3. Applicant's arguments, filed March 20, 2006, with respect to claims 1-27, have been considered but are moot in view of the new ground(s) of rejection. See paragraph no. 2.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dcd

May 30, 2006.

  
**JOHN A. MCPHERSON**  
**PRIMARY EXAMINER**